Letters to the Journal

Letters are welcomed and will be published as space permits. Like other material submitted for publication, they should be typewritten, double-spaced, should be of reasonable length, and will be subject to the usual editing. The accuracy of statements of fact contained in these letters is the responsibility of the correspondent.

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THE OBSTETRICAL USE OF ERGOT

To the Editor:

We think it necessary to comment on the paper by Dr. C. A. Douglas Ringrose (*Canad. Med. Ass. J.*, 87: 712, 1962). He has described the case of a 17-year-old primigravida who died of a cerebral hemorrhage apparently caused by an episode of hypertension which followed the intravenous injection of 0.2 mg. of ergonovine maleate (ergometrine) when the head was crowning. Dr. Ringrose questions the need for ergot derivatives in obstetrics and implies in the title of his article that their use is "a violation of the doctrine 'Primum non nocere' ".

It will be unfortunate if the inferences which have been drawn from this single case lead any practitioner to abandon the use of ergometrine.

As Dr. Ringrose admits, the findings at autopsy did not rule out the possibility of a pre-existing vascular defect which might have ruptured as a result of any sudden and severe rise in blood pressure. We are not convinced that the hypertension which his patient developed at the end of the second stage of labour was due to the injection of ergometrine. It is true that some patients who are given ergometrine, especially intravenously, have a rise in blood pressure which may be due to the sudden surge of blood squeezed out of the uterus. But some women who receive injections of atropine, or meperidine—or no injection at all—during labour do just the same thing. We have been impressed by a type of patient who has a normal blood pressure during pregnancy and labour but develops marked hypertension at the time of delivery or just afterwards; this persists for some days. A follow-up of these patients shows that they are prone to develop true essential hypertension later. His patient may have been one of this group. We do not understand, either, Dr. Ringrose's preoccupation with vasospasm caused by ergometrine. There is no pharmacological evidence that the alkaloid ergonovine (ergometrine) has this effect in ordinary dosage. We have seen no clinical evidence of it, apart from a very few patients who have had a little tingling of the fingers after repeated—and probably excessive—administration of ergometrine during the puerperium.

In his discussion, Dr. Ringrose draws extensively on the papers by Friedman and his co-workers at Columbia University, to suggest that (a) many women who receive no oxytocics do not bleed excessively after delivery, and (b) there are safer oxytocics than ergometrine. Both statements require modification. In Friedman's series, 22% of patients *did* bleed heavily and had to be treated, and in our series the proportion was 39%. Even among normal parturients it is impossible to predict which patients will bleed. Prevention is better than treatment, and if we can protect these patients from hemorrhage we should do so. Even if the use of oxytocic drugs involves a slight risk, it is much less than the risk of a blood transfusion. Oxytocin produces strong rhythmic contractions of the uterus, but it will not maintain a prolonged tonic contraction, as ergometrine does, unless it is given in a continuous intravenous drip. Sparteine sulfate, also mentioned by Dr. Ringrose, has no proved value in the prevention or treatment of postpartum hemorrhage.[1]

The results of a recent investigation in this department[2] may be of interest. Thirty-nine per cent of normal parturients who received no oxytocics have moderate (> 300 ml.) or severe (> 600 ml.) blood loss. Either oxytocin or ergometrine given intramuscularly at the time of the delivery of the anterior shoulder does not significantly reduce the incidence of excessive bleeding or the amount of blood lost. But when oxytocin (1 ml.) is given intramuscularly with the anterior shoulder and ergometrine (0.5 mg.) is given intramuscularly immediately after the placenta is delivered, the incidence of postpartum hemorrhage, the average blood loss, the duration of the third stage, and the need for intervention are all reduced to a significant degree. This is now our accepted routine of management. It seems logical to give oxytocin, which causes intermittent contractions, while the placenta is separating and being expelled; and ergometrine, which stimulates a prolonged tonic contraction, when the uterus is empty.

We were also interested in an excellent article on postpartum hemorrhage by Paul and Kinch.[3] They do not mention ergonovine (or ergometrine) by name, though they advise the use of "an oxytocic agent" intravenously in several circumstances. The article would have been more useful to general practitioner obstetricians if the authors had been more specific and had said what drug to use when. An intravenous drip of dilute oxytocin, which they advocate, keeps the uterus well contracted, but to prepare it and set it up requires time and assistance. An intravenous or intramusclar injection of ergometrine is quicker, and just as safe.

We think that ergometrine has its main use in two circumstances: (1) if there is excessive bleeding during the third stage and the placenta has not separated, to check the hemorrhage while preparations are being made for manual removal; and (2) routinely after the placenta is expelled, to limit further bleeding.

No effective drug in the entire pharmacopeia is absolutely safe. Ergometrine is one of the most efficient oxytocic drugs, and as safe as any other. Postpartum hemorrhage is still the leading cause of maternal death. The routine use of ergometrine is one of the best ways of preventing or treating this unpredictable and sometimes tragic catastrophe.

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To the Editor:

Dr. D. B. Stewart's letter presents some excellent points. I would agree that ergot derivatives are very efficient in expediting the third stage of labour and preventing postpartum hemorrhage. However, as he mentioned, they can produce side effects of hypertension (whatever the mechanism), nausea and vasospasm. In a small percentage of cases these effects can be quite marked. For the past year, I have employed an alternative oxytocic and have encountered no problems with respect to postpartum hemorrhage.

For the management of primigravida, I prefer saddle-block anesthesia with delivery by outlet forceps. Synthetic oxytocin (Syntocinon, Sandoz), 1 c.c., is given intramuscularly as the baby is delivered or after the placenta is expelled.

For multiparous women and primigravidae with breech presentations, pudendal-block anesthesia is employed with the same oxytocic. The birth canal, uterus and cervix are routinely examined for evidence of trauma, anomaly or retained products of conception after each delivery. The manual exploration of the uterus does not result in any increased morbidity, as several authors have pointed out.

In the situations mentioned in the original paper where there is a greater than average risk of postpartum atony, I have used an intravenous oxytocin drip because it has a more prolonged and efficient action. I have encountered no significant elevation of blood pressure with the above routines. Occasionally, when the parturient first sees her baby, the systolic pressure may increase slightly because of the emotional stimulus. This is a modest and very transient effect and does not affect the diastolic blood pressure.

I note that Dr. Stewart uses ergometrine intramuscularly. This is certainly a much safer practice than its intravenous administration.

I will continue to use oxytocin as outlined above as long as it is as efficient as ergot and does not have the side effects of this agent. In any case, it would be a pretty dull world if we all did things exactly the same way.

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To the Editor:

We appreciate the comment by Professor D. B. Stewart and Dr. C. P. Douglas on our article, "Postpartum Hemorrhage". In respect to the points raised in their letter, I recently questioned 10 obstetricians on their routine management of the third stage of labour; I received 10 different answers.

In view of this fact, Dr. Paul and I decided that the routine method which we would advise must have the merit of simplicity so that it could be easily carried out with the minimum of help in the delivery room. In our paper we state, "Slow delivery of the baby, allowing the uterus to retract slowly, ensures smooth placental separation. At least one-half minute should be allowed for the delivery of the anterior shoulder. As soon as this is completed, 1 c.c. of synthetic oxytocin (Syntocinon) is administered intramuscularly."

The excellent routine recommended by Clarke and Douglas was carried out in our unit for one year with very good results. I thoroughly recommend it, but recently we have tended to use ergometrine less frequently, for the following reasons: (1) It occasionally causes vomiting. (2) It occasionally causes unexpected hypertension. (3) In our unit, the increased use of epidural analgesia and anesthesia may potentiate the hypertensive effect of ergometrine. This may be due to the use of vasopressors as treatment for hypotension.

However, in the patient who is bleeding or who has been delivered under general anesthesia, administration of 0.25 mg. of ergometrine intravenously is the most effective method of inducing prompt uterine contraction. This can then be maintained by rapid oxytocin (Syntocinon) infusion.

Finally, I agree that to abandon the use of the ergot oxytocics on the basis of a single case report by Dr. Ringrose would be a hasty judgment indeed.

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MEDICAL CANADIANA

To the Editor:

For a number of years my wife and I have been interested in collecting early Canadiana and have restored a small log chapel, built by the early settlers around 1849, a log school house built around 1835 and an old log house built around 1815. We have been able to secure the interior furnishings and equipment of one of the early veterinarians who carried on his practice in Rawdon, P.Q., for a great many years, and now are most anxious to try to re-create an early medical doctor's office, together with a small pharmacy.

We have collected several items which belonged to Dr. Newton Smiley who was the country doctor in the Rawdon area for about 50 years up until his death about 20 years ago. Some of our medical friends have very kindly donated early surgical instruments dating back to the turn of the century, including a wooden stethoscope. We would like to enlarge our collection of early medical books and other articles that would have been commonly found in a country doctor's office, including examining instruments and early tooth extractors. We understand that the early country doctors generally mixed their own medicines and therefore had a small pharmacy connected with their offices. We would like to re-create this as well if we can get the necessary equipment.

If any of your readers can give us any leads on this equipment or have any of these articles themselves, we would be happy to purchase them; or, if they would care to donate them to our little museum we would like to credit them accordingly, as we do get quite a number of people coming to see our collection.

The December 1960 issue of *Canadian Homes* magazine contains an article on our collection, which will give your readers some idea of what we are attempting to accomplish.

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